Calculators for Measuring the Impact of Health Science Libraries and Librarians

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NN/LM National Network of Libraries of Medicine
MidContinental Region

Valuing Libraries and Librarians

"Libraries are not ends in themselves, and they should not be supported because they have intrinsic value."

Plutchak TS. Means, not ends. J Med Libr Assoc 2004 Jul;92(3):294

And

In the middle of difficulty lies opportunity.

Library service is value-added

- **Cost savings**
  - Institutional & Personal
- **Time savings**
  - Travel, discovery, skills acquisition, opportunity for other uses of time
- **Access**
  - Opportunity to use/apply information
- **Impact on clinical, research, safety practice**

The bottom line – either you are

- **Generating income or controlling expenses or supporting those who do**

OR

- **Creating recognized value expenses**

OR

- **Creating expenses that must be controlled or eliminated**

Will Welton, PHD, Director, MHA Program, University of Washington

Statistics

Not everything that can be counted counts and not everything that counts can be counted.

Albert Einstein

Your statistics

- **What do you collect?**
    - Resources used (in-house, borrowed, online)
    - Database searches
    - Purchases
    - Staffing
    - Services provided
- **What do you do with it?**
    - Annual reports
    - Budget requests

Cost/Benefit Analysis and Return on Investment

- **Finance terms that relate costs and benefits**
- **Express benefits in $$**
- **Articulate costs**
- **CBA is a ratio**
- **ROI is an interest rate**

Benefits

Value of

- **Books/Journals used (in house or borrowed)**
- **E-Journal articles accessed**
- **Database searches**
- **Services**
- **Patron time saved**
- **Value of information available for clinical, research, teaching, etc**

Costs

Value of

- **Purchase price**
- **Staff time**
- **Space, light, heat, computers, benefits**

Values for ILL services

- **Pay per view (Benefit)**
  - Patron's time ($60/hour x .3) $18
  - Vendor's fee ($35-$65)   +$35
  - TOTAL $53
- **Document Delivery services (Cost)**
  - Librarian's time ($20/hr x .25) $ 5
  - Fee charged by lending library   +$15
  - TOTAL $20

CBA of ILL service

$53

÷ $20

$2.65 (cost of pay per view /one ILL)

$2.65 of benefit for each dollar spent by library on ILL service

ROI of ILL service

$(53 - 20) \div 20 = 1.15 \times 100$

(cost of pay per view-cost for one ILL/cost for one ILL)

115% return on each ILL

EFTS vs Paper Invoicing and Payment

- **Average cost to Invoice**
  - produce and transmit a paper invoice = $5

  or

  - e-invoice = $1.65.
- **Average cost to Pay**
  - process a paper payment = $4.50

  or

  - e-payment = $1.90

Return on lending income of using EFTS over paper

Charge	Paper Transaction	EFTS Transaction	% Return
ILL national max cost	**$11.00**	**$11.00**	
Invoice generation	▬ $5.00		
EFTS 5% charge		▬ ($0.55)	
Net income	▬ $6.00	▬ $10.45	
Income from 100 ILLs	$600.00	$1,045.00	
EFTS ROI for Lending		($1,045 – 600)/$600	74.2%

Return on borrowing costs of using EFTS over paper

Charge	Paper Transaction	EFTS Transaction	% Return
ILL national max cost	**$11.00**	**$11.00**	
Payment processing	+ $4.50	+ $1.90	
Net Cost	= $15.50	= $12.90	
Costs for 100 ILLs	$1,550.00	$1,290.00	
EFTS ROI for Borrowing		(1,550-1,290)/1,290	20.2%

Replacing your library

- **What is the value of the resources and services your library provides?**
- **What would your users pay on the open market?**
- **Would your institution pay the retail costs?**
- **Would your institution pay for everyone who needs information or for select staff?**
- **What is your CBA and ROI?**

Calculators that do the math for you

- **Retail value calculator**

http://nnlm.gov/mcr/evaluation/calculator.html

- **CBA/ROI calculator for books/journals**
  - CBA: Benefits/Costs
  - ROI: ((Benefits-Costs)/Costs) *100

http://nnlm.gov/mcr/evaluation/roi.html

- **CBA/ROI calculator for databases**

http://nnlm.gov/mcr/evaluation/dbroi.html

Calculator data points

- **Where do the values come from?**
- **What does each line mean?**
- http://nnlm.gov/mcr/evaluation/valuation.html
- http://nnlm.gov/mcr/evaluation/calculator.html

Your institution realizes a benefit of $ for every one dollar budgeted.

Where is your library? [▼]

What type of library is it? [▼]

Library Annual Budget - you *must* enter your library's annual budget without commas [   ]

Number of months of stats you are using: [   ]

Number of Uses	Library Resources or Services	Cost of Resource or Service	Value of Resources or Services
[ ]	Print and e-Books used (in house, checked out or online)	125	$ [0.00]
[ ]	Print journals used (in house or checked out)	35	$ [0.00]
[ ]	E-Journal articles accessed	35	$ [0.00]
[ ]	Document Delivery (Items borrowed for/delivered to users)	18	$ [0.00]
[ ]	Reference questions Answered	45	$ [0.00]
[ ]	Mediated searches	75	$ [0.00]
[ ]	Class hours taught (Sum of students/class x hours/class)	30	$ [0.00]
[ ]	AVs used or borrowed	150	$ [0.00]
[ ]	Self service photocopies	.10	$ [0.00]
[ ]	Meeting room use	50	$ [0.00]
[ ]	Hours of computer use (i.e. Internet, MS Word, etc.)	12	$ [0.00]
[ ]	Add another service or resource	[ ]	$ [0.00]
[ ]	Add another service or resource	[ ]	$ [0.00]
[ ]	Add another service or resource	[ ]	$ [0.00]

[Clear Form] $ [0.00]

Becker Library

Value of Library Resources and Services

Your institution realizes a benefit of $12.10 for every one dollar budgeted.

Where is your library? | Missouri ▾
What type of library is it? | Academic ▾

Library Annual Budget - you *must* enter your library's annual budget without commas | 5600000
Number of months of stats you are using: | 12

Number of Uses	Library Resources or Services	Cost of Resource or Service	Value of Resources or Services
35224	Print and e-Books used (in house, checked out or online)	125	$ 4403000.00
22268	Print journals used (in house or checked out)	35	$ 779380.00
1762613	E-Journal articles accessed	35	$ 61691455.00
1525	Document Delivery (Items borrowed for/delivered to users)	18	$ 27450.00
17425	Reference questions Answered	45	$ 784125.00
	Mediated searches	75	$ 0.00
1380	Class hours taught (# students x total class hours)	30	$ 41400.00
	AVs used or borrowed	150	$ 0.00
96124	Self service photocopies	.10	$ 9612.40
	Meeting room use	50	$ 0.00
	Hours of computer use (i.e. Internet, MS Word, etc.)	12	$ 0.00
	Add another service or resource		$ 0.00
	Add another service or resource		$ 0.00
	Add another service or resource		$ 0.00

Clear Form | $ 67736422.40

J Otto Lottes Library

Value of Library Resources and Services

Your institution realizes a benefit of $4.71 for every one dollar budgeted.

Where is your library? | Missouri ▾ |
What type of library is it? | Academic ▾ |

Library Annual Budget - you *must* enter your library's annual budget without commas | 2265835 |
Number of months of stats you are using: | 12 |

Number of Uses	Library Resources or Services	Cost of Resource or Service	Value of Resources or Services
27550	Print and e-Books used (in house, checked out or online)	125	$ 3443750.00
2427	Print journals used (in house or checked out)	35	$ 84945.00
168264	E-Journal articles accessed	35	$ 5889240.00
12739	Document Delivery (Items borrowed for/delivered to users)	18	$ 229302.00
9250	Reference questions Answered	45	$ 416250.00
2532	Mediated searches	75	$ 189900.00
1158	Class hours taught (Sum of students/class x hours/class)	30	$ 34740.00
6	AVs used or borrowed	150	$ 900.00
332703	Self service photocopies	.10	$ 33270.30
738	Meeting room use	50	$ 36900.00
26780	Hours of computer use (i.e. Internet, MS Word, etc.)	12	$ 321360.00
	Add another service or resource		$ 0.00
	Add another service or resource		$ 0.00
	Add another service or resource		$ 0.00

| Clear Form | | | $ 10680557.30 |

HSLNKC Library

Value of Library Resources and Services

Your institution realizes a benefit of $2.32 for every one dollar budgeted.

Where is your library? | Kansas ▼

What type of library is it? | Hospital - 201 - 500 staffed beds ▼

Library Annual Budget - you *must* enter your library's annual budget without commas | 100000

Number of months of stats you are using: | 12

Number of Uses	Library Resources or Services	Cost of Resource or Service	Value of Resources or Services
50	Print and e-Books used (in house, checked out or online)	125	$ 6250.00
1442	Print journals used (in house or checked out)	35	$ 50470.00
2649	E-Journal articles accessed	35	$ 92715.00
747	Document Delivery (Items borrowed for/delivered to users)	18	$ 13446.00
20	Reference questions Answered	45	$ 900.00
635	Mediated searches	75	$ 47625.00
15	Class hours taught (# students x total class hours)	30	$ 450.00
58	AVs used or borrowed	150	$ 8700.00
	Self service photocopies	.10	$ 0.00
	Meeting room use	50	$ 0.00
	Hours of computer use (i.e. Internet, MS Word, etc.)	12	$ 0.00
328	Internet article printouts	35	$ 11480.00
	Add another service or resource		$ 0.00
	Add another service or resource		$ 0.00

Clear Form

$ 232036.00

ROI of Book and Journal Collections

Salary Information:	User's Average Annual Salary	$ 60000	Hours Worked Per Year	2080	Library Salary Budget	$ 45000

Benefits		Costs		TOTAL Benefit	TOTAL Cost
Books used (in house or borrowed)				$ 0	$ 0
Number borrowed or used					
Average retail cost of a book	$ 0	Book budget	$ 0		
User time saved for each book borrowed (in 10ths of an hr)	0	Portion of all staff time devoted to the book collection (order, receive, catalog, process,shelve,etc) in 10ths	0		
Print journals used (in house or borrowed)				$ 0	$ 0
Number articles read by all users					
Per article price from a vendor	$ 0	Journal budget (print and electronic)	$ 0		
User time saved per article available through library (in 10ths of an hr)	0	Portion of all staff time devoted to journal collection (order, license, receive, process, manage, shelve, etc.) in 10ths	0		

Clear Form	Total Benefits Value: 0.00	Total Costs: 0.00

Benefit/Cost Ratio: 0.00	ROI %: 0.00

J Otto Lottes Library

Salary Information:	User's Average Annual Salary	$ 100000	Hours Worked Per Year	2080	Library Salary Budget	$ 108584

Benefits		Costs			TOTAL Benefit	TOTAL Cost
Books used (in house or borrowed)					$ 3774901.00	$ 131087.44
Number borrowed or used	27550					
Average retail cost of a book	$ 125	Book budget	$ 113714			
User time saved for each book borrowed (in 10ths of an hr)	.25	Portion of all staff time devoted to the book collection (order, receive, catalog, process, shelve, etc) in 10ths	.16			
Journals used (in house or borrowed)					$ 8436231.98	$ 613805.88
Number articles read by all users	170691					
Per article price from a vendor	$ 35	Journal budget (print and electronic)	$ 606205			
User time saved per article available through library (in 10ths of an hr)	.3	Portion of all staff time devoted to journal collection (order, license, receive, process, manage, shelve, etc.) in 10ths	.07			

Clear Form	Total Benefits Value: 12211132.98	Total Costs: 744893.32

	Benefit/Cost Ratio: 16.39	ROI %: 1539.31

Becker Library

Salary Information:	User's Average Annual Salary	$ 100000	Hours Worked Per Year	2080	Library Salary Budget	$ 2100000

Benefits		Costs		TOTAL Benefit	TOTAL Cost
Books used (in house or borrowed)				$ 4825981.42	$ 196000.00
Number borrowed or used	35221				
Average retail cost of a book	$ 125	Book budget	$ 196000		
User time saved for each book borrowed (in 10ths of an hr)	.25	Portion of all staff time devoted to the book collection (order, receive, catalog, process,shelve,etc) in 10ths	.14		
Print journals used (in house or borrowed)				$ 92506812.4?	$ 382500.00
Number articles read by all users	1784881				
Per article price from a vendor	$ 35	Journal budget (print and electronic)	$ 172500		
User time saved per article available through library (in 10ths of an hr)	.35	Portion of all staff time devoted to journal collection (order, license, receive, process, manage, shelve, etc.) in 10ths	.1		

Clear Form	Total Benefits Value: 97332793.89	Total Costs: 578500.00

	Benefit/Cost Ratio: 168.25	ROI %: 16725.03

ROI of databases

Salary Information:	User's Average Annual Salary	$ 100000	User Hours Worked Per Year	2080	Library Salary Budget	$ 2100000

Benefits		Costs		TOTAL Benefit	TOTAL Cost
Database use				$ 759867.52	$ 74481.00
Database sessions or full text articles clicked or tables of contents retrieved or subscriptions represented (use one of these, not all!)	1480				
Average retail cost of a single search by a broker OR of a full text article (not both)	$ 499	Library's Cost for Database(s)	$ 53481		
User time saved for each search session or article retrieved	.3	Portion of all staff time devoted to supporting the database	.01		

Clear Form	Total Benefits Value: 759867.52	Total Costs: 74481.00

	Benefit/Cost Ratio - $ Benefit for each $ spent: 10.20	ROI %: 920.22

So who cares?

- **Pick the best answer:**
  - The doc in the clinic
  - The nurse on the unit
  - The patient
  - The CFO

Share your value

- **Help create a national picture of the value of health sciences libraries**
  - Use the Retail Value Calculator to determine your library's value
  - Hit the submit button to add your data to the national Value of Health Sciences Libraries Database
- **Watch for a paper describing the financial contribution of health science libraries nationwide!**

Preliminary data – 112 libraries, 36 states + 3 provinces

Region	# Libraries	Average CBA
GMR	20	5.55
MAR	24	5.64
MCR	22	7.43
NER	9	4.51
PNR	3	4.48
PSR	13	4.24
SCR	4	7.66
SEA	10	6.25
Canada	7	11.50
Grand Total	112	6.19

Manage Your Environment

- **Calculate your financial value**
  - Use for budget development & negotiation
- **Illustrate your contribution to the bottom line**
  - Annual reports
  - Bookmarks, flyers, posters, publications
  - 30 second elevator talks

Your turn

- **What one thing can you do to show the $$ value of your library?**

- **Need help? Call us! 800-338-7657**

- **Evaluation/CE request**

http://www.surveymonkey.com/s/calculators_eval

- **Barb Jones – MCR Advocacy Liaison**

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